Safetygram

NCI-Frederick

ISM-182 LABORATORY PERSONNEL JUNE 2004

CHEMICAL SPILLS

Many chemical spills in laboratories are cleaned up by laboratory workers themselves. Regulations allow laboratory workers to clean up such spills, although it is advisable that they are trained to handle spills and have access to adequate equipment to carry out the cleanup safely. In general, these are spills of known composition that do not involve injury, do not represent a fire or personal hazard, and are less than one gallon. Outside help from EHS should be requested if there is any doubt about the ability of the laboratory personnel to clean up the spill safely. General guidelines for cleaning up spills are as follows:

1. Assess the spill's potential hazard to personnel within the work area, to other parts of the building, and to the outside environment.

2. Remove possible sources of ignition if the spilled material is flammable. Turn off hot plates, stirring motors, and flames. Shut down equipment that could increase danger.

3. Secure the area so that no one will walk through the spill or interfere with the cleanup efforts.

4. Choose appropriate personal protective equipment:

- Always wear protective gloves and goggles or a face shield.
- If there is a chance of body contact with the spill, wear a lab coat or coveralls.
- If there is a danger of inhalation of toxic vapors, wear a respirator. Only properly trained personnel are authorized to use respiratory protection equipment (RPE). Contact EHS if there is any doubt about the toxicity of a chemical or the proper use of RPE.
- Note that protective devices must be appropriate for the anticipated hazards (e.g., respirator cartridges must be approved for use with the contaminant, gloves must be resistant to the penetration of solvents, etc.).

5. Locate a spill control kit or other appropriate absorbent and cleanup supplies.

6. Confine or contain the spill:

- Prevent spilled materials from entering the sewer system, such as through a floor drain.

- Cover the spill with an absorbent material. Paper towels may be appropriate for small, unreactive materials.
- Collect the absorbed materials and place them in a securely closed container or thick polyethylene bag.
- If the spilled material is an acid or base, cautiously use a neutralizing sorbent such as Neutracit-2 (for bases) or Neutrasorb (for acids). Spill control kits are commercially available for the cleanup of many kinds of chemical spills.

7. Dispose of the absorbed materials by properly labeling the container with the contents and calling x5718 for pick up.

If you have questions about spill cleanup procedures or need assistance with a large spill, contact EHS at x1451. For after-hours emergencies, contact Protective Services at x1091.